

**REMARKS:**

The Examiner is thanked for the Office Action of August 27, 2003. In response thereto, Applicant has amended claim 1 in clarification, and added new claims 50-55. In addition, Table II in the specification was amended. Columns 9 and 10 of Table II were inadvertently identified as "Smoothness Value (Coarse)" and "Smoothness Value (Fine)". The values in column 9 correspond to "Smoothness value (Fine)", and the values in column 10 correspond to "Smoothness Value (Coarse)". The specification has been amended to correct this mistake. No new matter has been added. Applicant respectfully requests reconsideration of the application in amended form.

Claims 1-8 were rejected as being anticipated by U.S. Patent No. 5,492,756 to Scale et al. The '756 patent discloses a low-density pressboard material prepared from particulate kenaf core. (See '756 patent, Abstract). "The material is suitable for relative low-density preparations." The resulting product has a density ranging from 200-300 kg/m<sup>3</sup>. (See '756 patent, column 3, lines 14-17). The '756 patent therefore fails to disclose a material having a smooth surface (such as claimed in the present invention), or a medium or high-density preparation (as provided in amended claim 1). To the contrary, the '756 patent states: "Although the product of this invention is suitable for use in any low-density board or panel application, particular uses include situations where acoustical or thermal insulation is desired and where floor resiliency or cushioning is needed, such as for athletic floor substrates." (See '756 patent, column 3, lines 35-39).

For preparations requiring a higher quality exterior surface, an overlay is required. Specifically, the '756 patent states: "where the panel is subject to user's viewing and enhanced surface qualities are desired, the panel may be rendered aesthetically more

pleasing and upgraded in surface qualities by the application of a facing (papers, textiles, plastics, vinyl composition tiles, wood veneers, and the like) thereto.” (See ‘756 patent, column 3, lines 39-44).

The present invention provides for a fibrous composite article formed from fibrous material having an average fiber length of less than about 2 millimeters (mm). The formed article has a density of at least about 45 lb/ft<sup>3</sup>, which is equivalent to about 720.8 kg/m<sup>3</sup>. Support for this amendment is provided in the specification on page 25, lines 13-16.

The Examiner states, “Because the fibrous article of Seal comprises the same materials having the same functions as instantly claimed, it is inherent that the fibrous article of Seal comprises a specific gravity and sizing agent as claimed by Applicant”. Applicant respectfully disagrees. As well known in the art, specific gravity corresponds to density – a specific gravity of 1 is equal to a density of 1000 kg/m<sup>3</sup>. The specific gravity of the claimed article is therefore at least about 0.72 (Specific gravity is calculated by dividing the density in kg/m<sup>3</sup> by 1000 kg/m<sup>3</sup>).

In contrast, the board disclosed by Seale et al. has a specific gravity of about 0.2 to 0.3. Seale et al. discloses a low-density board used for acoustical and thermal insulation. The density (as well as specific gravity) of the material disclosed by Seale et al. is substantially lower than in the present invention.

The density and surface appearance of a low-density particleboard is easily distinguished from the density and surface appearance of a high-density fiberboard. Attached hereto are images of a formed fibrous composite material. Exhibit A shows a low-density kenaf particleboard (such as disclosed in the ‘756 and ‘607 patents). Note

that the surface is rough, and does not provide an exterior surface suitable for applications where a smooth, appealing exterior surface is required.

Exhibit B shows a high-density kenaf fiberboard. The surface of the fiberboard is much smoother compared to the particleboard. In addition, it is apparent that the densities of the two examples differ greatly. The density of the high-density kenaf fiberboard is much greater than the density of the low-density particleboard.

Applicant has amended claim 1 to provide that the article has a density of at least about 45 lb/ft<sup>3</sup>, or about 720.8 kg/m<sup>3</sup>. The properties of the article claimed in the present invention are therefore not inherently present in Seale et al. Seale fails to disclose an article having a density corresponding to that of the present invention.

Claims 1-2, 4-6, 9-19 and 23-30 were rejected as being obvious over Seale et al. in view of WO 00/69607. As set forth above, the '756 patent fails to disclose or suggest the present invention as claimed by Applicant. Likewise, the '607 patent fails to disclose or suggest an article comprising fibrous material having an average fiber length of about 2 mm, wherein the formed article has a density of at least about 45 lb/ft<sup>3</sup> or about 720.8 kg/m<sup>3</sup>.

To the contrary, the '607 patent discloses a composite structural member, such as a panel or beam, suitable for insulating and sound absorption applications. (See '607 patent, examples, page 10). The density of the boards ranged between 160 kg/m<sup>3</sup> to 640 kg/m<sup>3</sup>. Therefore, neither of the cited references disclose nor suggest an article having the density of the article claimed in the present invention.

The density of the materials disclosed in the cited references is appropriate for certain applications and functions, such as sound and thermal absorption. Higher density

applications for such fibrous material have not provided articles with acceptable exterior surfaces for applications wherein the exterior surface is exposed, as shown in Exhibit A. In fact, in order for the panel disclosed in Seale et al. to have an acceptable exterior surface, an overlay or veneer must be used (as pointed out in the specification of the '756 patent). Similarly, the material disclosed in the '607 patent is directed to a material suitable for applications where the exterior surface is not exposed.

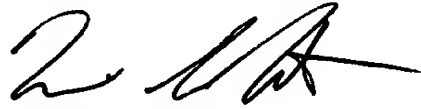
The surface quality of the present invention is specifically claimed in terms of smoothness values. In addition to having a density of at least 45 lb/ft<sup>3</sup> (or about 720.8 kg/m<sup>3</sup>), dependent claims 10, 14, 15, 24 and 25 provide that the article has a smoothness value of at least about 2. Neither of the cited references provide an article having the claimed smoothness value of the present invention. In fact, smoothness is likely not a consideration for the boards manufactured according to the cited references, given they are directed to boards used for thermal or acoustical insulation, which do not typically have exposed exterior surfaces). As such, smoothness is typically not measured for low-density boards, such as disclosed the '756 and '607 patents, given articles having such densities do not have smoothness values corresponding to values as in the present invention.

The Examiner indicated that claims 20-22 would be allowable if rewritten in independent form. New claim 50 corresponds to dependent claim 22 rewritten in independent form. Claims 51-53 all depend from claim 50. New claim 54 corresponds to dependent claim 20 rewritten in independent form, with new claim 55 depending therefrom.

Reconsideration of the application in amended form is respectfully requested. In light of the arguments set forth herein, Applicant asserts that all pending claims are now in condition for allowance, and earnestly solicits same. If further clarification of the arguments is required, Applicant invites the Examiner to contact the undersigned via telephone or email.

It is believed that no fee is due with this submission. Should that determination be incorrect, then please debit Account No. 50-0548 and notify the undersigned.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'W. C. Schrot', written in a cursive style.

William C. Schrot  
Registration No. 48,447  
Attorney for Applicant

**Liniak, Berenato & White, LLC**  
6550 Rock Spring Drive, Ste. 240  
Bethesda, Maryland 20817  
Telephone: (301) 896-0600  
Facsimile: (301) 896-0607



